AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of correcting a fabrication layout corresponding to an original fabrication layout for proximity effects, the method comprising:

executing a routine implementing an inverse proximity effects model for a segment of an edge in an original fabrication layer, the inverse proximity effects model including a lookup table for each kernel function, the lookup table including an amplitude contribution value at a position in the lookup table related to an edge position in a printed feature layer; and

determining a correction for the segment based on a difference between an output from the inverse proximity effects model and an initial position for the segment in the fabrication layout.

2. (Currently Amended) A computer readable medium for correcting a fabrication layout corresponding to an original fabrication layout for proximity effects, the computer readable medium carrying instructions to cause one or more processors to perform:

executing a routine implementing an inverse proximity effects model for a segment of an edge in ~~the~~ an original fabrication layer, the inverse proximity effects model including a lookup table for each kernel function, the lookup table including an amplitude contribution value at a position in the lookup table related to an edge position in a printed feature layer; and

determining a correction for the segment based on a difference between an output from the inverse proximity effects model and an initial position for the segment in the fabrication

layout.

3. (Currently Amended) A carrier wave for correcting a fabrication layout corresponding to an original fabrication layout for proximity effects, the carrier wave carrying instructions to cause one or more processors to perform:

executing a routine implementing an inverse proximity effects model for a segment of an edge in ~~the~~ an original fabrication layer, the inverse proximity effects model including a lookup table for each kernel function, the lookup table including an amplitude contribution value at a position in the lookup table related to an edge position in a printed feature layer; and

determining a correction for the segment based on a difference between an output from the inverse proximity effects model and an initial position for the segment in the fabrication layout.

4. (Currently Amended) A computer system for correcting a fabrication layout corresponding to an original fabrication layout for proximity effects, the computer system comprising:

a computer readable medium carrying data representing the original fabrication layout; and

one or more processors coupled to the computer readable medium, the one or more processors configured for

executing a routine implementing an inverse proximity effects model for a segment of an edge in ~~the~~ an original fabrication layer, the inverse proximity effects model including a lookup table for each kernel function, the lookup table including an amplitude contribution value at a position in the lookup table related to an edge position in a printed feature layer, and

determining a correction for the segment based on a
difference between an output from the inverse proximity
effects model and an initial position for the segment in
the fabrication layout.

5. (Currently Amended) A system for correcting a
fabrication layout corresponding to an original fabrication
layout for proximity effects, the system comprising:

an inverse proximity effects model for a segment of an edge
in ~~the~~ an original fabrication layer, the inverse proximity
effects model including a lookup table for each kernel function,
the lookup table including an amplitude contribution value at a
position in the lookup table related to an edge position in a
printed feature layer, and

a means for determining a correction for the segment based
on a difference between an output from the inverse proximity
effects model and an initial position for the segment in the
fabrication layout.

6. (Currently Amended) A method for fabricating a printed
features layer including features corrected for proximity
effects, the method comprising:

executing a routine implementing an inverse proximity
effects model for a segment of an edge in ~~the~~ an original
fabrication layer;

determining a correction for the segment based on a
difference between an output from the inverse proximity effects
model and an initial position for the segment in ~~the~~ a
fabrication layout,

determining an optimal bias for the segment in the
fabrication layout based on the correction;

displacing the segment in the fabrication layout from the

initial position based on the optimal bias;

producing a mask based on the fabrication layout with the segment in the fabrication layout displaced; and

producing the printed features layer in a fabrication process using the mask.

7. (Currently Amended) A mask for fabricating a printed features layer, the mask including an opaque region having a segment corrected for proximity effects, the segment corresponding to at least one portion of a target edge in an original fabrication layout for the printed features layer, wherein:

the segment is displaced from the corresponding portion by a correction distance;

the correction distance is based on a difference between an output from an inverse proximity effects model and the target edge, the inverse proximity effects model including a lookup table for each kernel function, the lookup table including an amplitude contribution value at a position in the lookup table related to an edge position in a printed feature layer; and

the output is based on executing a routine implementing an inverse proximity effects model with input from the original fabrication layout.

8. (Currently Amended) A device having a proximity-corrected element, the device produced using a mask including an opaque region having a segment corrected for proximity effects, the segment corresponding to at least one portion of a target edge in an original fabrication layout for the printed features layer, wherein:

the segment is displaced from the corresponding portion by a correction distance;

the correction distance is based on a difference between an output from an inverse proximity effects model and the target edge, the inverse proximity effects model including a lookup table for each kernel function, the lookup table including an amplitude contribution value at a position in the lookup table related to an edge position in a printed feature layer; and

the output is based on executing a routine implementing an inverse proximity effects model with input from the original fabrication layout.